

SINCE

1938-2018 30 Made in Germany! Developed and produced in Germany



Corner shower floor element "ultraflat" with corner installation plate made of PUR



Shower floor element with built-in floor drainage pump



Shower floor element made of PUR complete with channel drainage and height-adjustable side panel



Shower floor element "ultraflat" made of PUR with central drainage



Shower floor element made of PUR with channel drainage, installation example



**Shower floor systems** 

Product range 2022.

for floor-level tiled showers

Shower floor element "ultraflat" made of PUR with eccentric drainage



Shower floor element made of PUR complete with channel drainage and height-adjustable side panel



00

Shower floor element "ultraflat" 120 x 200 cm made of PUR with eccentric drainage



Shower floor element made of PUR with channel drainage, installation example

# Grumbach

... Innovation, Competence and Experience.

## Contents

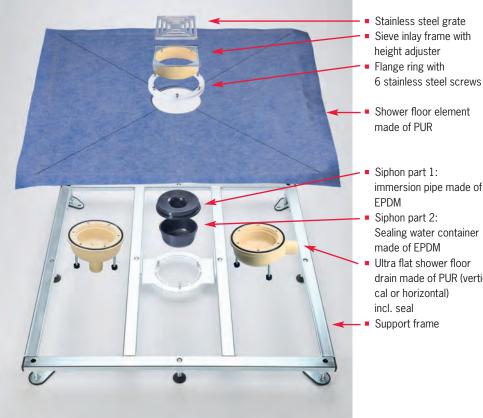
Grumbach

80

۲٦ لرج

## The Grumbach shower floor system:

- 45-52 Shower floor elements made of PUR 53-54 Support frame for shower floor elements
- 55-58 Oder form for special models



- Stainless steel grate Sieve inlay frame with
- height adjuster Flange ring with
- Shower floor element made of PUR
- Siphon part 1: immersion pipe made of
- Siphon part 2: Sealing water container made of EPDM
- Ultra flat shower floor drain made of PUR (vertical or horizontal) incl. seal
- Support frame

Shower floor systems

Walk-in showers are becoming increasingly popular, not only wheelchair users, but also senior citizens, are tending towards using this type, as there is no threshold which could cause tripping. In addition, floor level showers allow a uniformed appearance in the bathroom – an important reason for their increased popularity. The shower floor can be optically integrated into the room completely. Matching tiles can then be fitted on the walls and floors.

For this reason, Grumbach has developed various shower floor elements, which can be installed on a robust base unit - support frame - with perfect fitting and without levelling fill or levelling screed.

The innovative floor level shower system from Grumbach consists of the following components:

- A. Shower floor elements made of PUR are made of highgrade, CFC-free and extra stable Polyurethane integral rigid foam (PUR). They are not only heat and condensation water insulated, but also they are suitable for direct tiling. The distinguish themselves through their high point load capacity  $(> 300 \text{ kg/m}^2)$  and are therefore also suitable for wheelchairs even when tiled with mosaic tiles. Compatible with most shower floor elements, the bathroom drain made of PUR (as a horizontal or vertical version) is delivered with an odour trap made of hygienic EPDM.
- B. Bathroom drain made of PUR vertical or horizontal, suitable to the shower floor element made of PUR
- C. The new support frame made of lacquered or galvanized tubular steel is suitable for the secure assembly and easy installation of shower floor elements made of PUR.

Pre-fabricated elements for building floor-level showers made of extra stable Polyurethane integral rigid foam (PUR) can be tiled directly

## Shower floor elements made of PUR

with central punctual drainage



Shower floor element "ultra flat" made of PUR  $900 \times 900 \times 25$  mm with central drain

# Shower floor element "ultra flat" made of PUR with central drainage, without drain

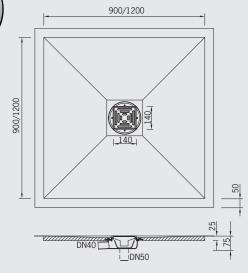
#### 90 x 90 cm

```
Art.-No. 1803
```

```
120x120 cm
```

```
Art.-No. 1804
```

- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated
- can be tiled directly
- with high point load capacity, therefore also suitable for wheelchairs
- with built in 4-sided slope
- with extra low installation height!
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)
- A connecting-sealing strip for the internal corners is included in the scope of delivery (Art-No. 1894).
- square-shaped 90 x 90 cm or 120 x 120 cm
- horizontal or vertical drain, can be ordered separately, see page 46
- Design grates made of stainless steel are available at extra charge, see page 46.
- Special square or rectangular shapes as well as quarter-circles and pentagonal forms up to 120 x 120 cm can be supplied on request at extra cost (80,- €, Art.-No. 1899.0)! See order form on page 55.





Scan the code and watch the **assembly video!** 

Technical data	
Dimensions	900 x 900 x 25 mm
	1200 x 1200 x 25 mm
Height of the PUR panel	25 mm
Height with drain siphon (horizontal)	75 mm without use of adjustable feet 100 mm with adjustable feet (min.) 120 mm with adjustable feet (max.) Hight of the adjustable feet: 55 mm
Drain connection	DN 40 horizontal DN 50 vertical
Drain capacity	0,7 l/s
Slope	ca. 2 %
Strength	ca. 350 kg/m <sup>2</sup>
Density	ca. 400 kg/m <sup>3</sup>
Tile height	8–45 mm
Inlet grate made of stainless steel	140x140 mm
Water sealing height	40 mm
Sealing strip overlap	50 mm

#### **Please order separately:**





The bathroom drain made of PUR, vertical or horizontal, suitable for the respective shower floor element (see page 46).

260.-€

340,-€



## Shower floor elements made of PUR

Accessories

95,–€



## Bathroom drain made of PUR vertical DN 50

#### Art.-No. 1880

85,– €

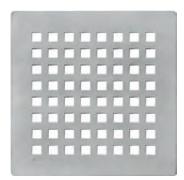
120,-€

- large water sealing volume due to large sealing water container made of EPDM
- with stainless steel grate 140x140 mm. Designer grate available at extra cost, see page 47)
- with new odour trap made of hygienic EPDM
- all individual parts of the odour trap can be easily removed and cleaned



#### Art.-No. 1881

- large water sealing volume due to large sealing water container made of EPDM
- with stainless steel grate 140x140 mm. Designer grate available at extra cost, see page 47)
- with new odour trap made of hygienic EPDM
- all individual parts of the odour trap can be easily removed and cleaned





## Design grate "2x2"made of stainless steel

|--|

as accessory for the bathroom drains made of PUR

120.-€

## as accessory for the bathroom drains made of PUR

Art.-No. 1843.8x8 (extra charge)

Design grate "8x8" made of stainless steel

Pre-fabricated elements for building floor-level showers
made of extra stable Polyurethane integral rigid foam (PUR)
can be tiled directly

## Shower floor elements made of PUR

0

with eccentric punctual drainage



Shower floor element "ultra flat" made of PUR 900x900x25 mm with eccentric drainage

# Shower floor element "ultra flat" made of PUR with eccentric drainage, without drain

## 90 x 90 cm

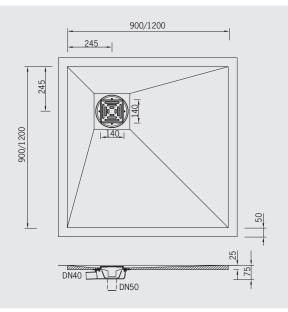
ArtNo. 1843	280,– €

#### 120x120 cm

#### Art.-No. 1844

360,– €

- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated
- can be tiled directly
- with high point load capacity, therefore also suitable for wheelchairs
- with built in 4-sided slope
- with extra low installation height!
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)
- A connecting-sealing strip for the internal corners is included in the scope of delivery (Art-No. 1894).
- square-shaped 90 x 90 cm or 120 x 120 cm
- horizontal or vertical drain, can be ordered separately, see page 46
- Design grates made of stainless steel are available at extra charge, see page 46.
- Special shapes can be supplied on request at extra cost (80,- €, Art.-No. 1899.0)! See order form on page 56.



Technical data	
Dimensions	900 x 900 x 25 mm
	1200 x 1200 x 25 mm
Height of the PUR panel	25 mm
Height with drain siphon (horizontal)	75 mm without use of adjustable feet 100 mm with adjustable feet (min.) 120 mm with adjustable feet (max.) Hight of the adjustable feet: 55 mm
Drain connection	DN 40 horizontal DN 50 vertical
Drain capacity	0,7 l/s
Slope	ca. 2 %
Strength	ca. 350 kg/m <sup>2</sup>
Density	ca. 400 kg/m <sup>3</sup>
Tile height	8–45 mm
Inlet grate made of stainless steel	140x140 mm
Water sealing height	40 mm
Sealing strip overlap	50 mm

#### **Please order separately:**





The bathroom drain made of PUR, vertical or horizontal, suitable for the respective shower floor element (see page 46).



## Shower floor elements made of PUR

with decentral punctual drainage



Corner shower floor element "ultra flat" made of PUR 900x900x25 mm with decentral drainage, suitable for the corner installation panel made of PUR

## Corner shower floor element "ultra flat" made of PUR with eccentric drainage, without drain, suitable for the corner installation panel made of PUR

290,-€

370,-€

#### 90 x 90 cm

ArtNo. 1836	

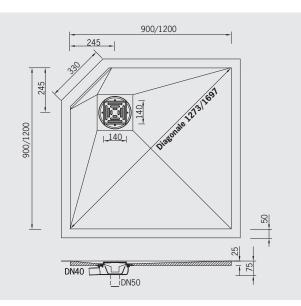
## 120x120 cm

#### Art.-No. 1834

- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated
- can be tiled directly

Shower floor systems

- with high point load capacity, therefore also suitable for wheelchairs
- with built in 4-sided slope
- with extra low installation height!
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)
- A connecting-sealing strip for the internal corners is included in the scope of delivery (Art-No. 1894).
- square-shaped 90 x 90 cm or 120 x 120 cm
- horizontal or vertical drain, can be ordered separately, see page 46
- Design grates made of stainless steel are available at extra charge, see page 46.
- Special shapes can be supplied on request at extra cost (80,- €, Art.-No. 1899.0)! See order form on page 57.



Technical data	
Dimensions	900 x 900 x 25 mm
	1200 x 1200 x 25 mm
Height of the PUR panel	25 mm
Height with drain siphon (horizontal)	75 mm without use of adjustable feet 100 mm with adjustable feet (min.) 120 mm with adjustable feet (max.) Hight of the adjustable feet: 55 mm
Drain connection	DN 40 horizontal DN 50 vertical
Drain capacity	0,7 l/s
Slope	ca. 2 %
Strength	ca. 350 kg/m <sup>2</sup>
Density	ca. 400 kg/m <sup>3</sup>
Tile height	8–45 mm
Inlet grate made of stainless steel	140x140 mm
Water sealing height	40 mm
Sealing strip overlap	50 mm

## Please order separately:





The bathroom drain made of PUR, vertical or horizontal, suitable for the respective shower floor element (see page 46).

Pre-fabricated elements for building floor-level showers
made of extra stable Polyurethane integral rigid foam (PUR)
can be tiled directly

## Corner installation panel made of PUR, for shower fittings





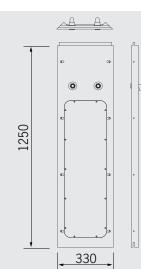
- Simple assembly:
  - Grooving the water pipe into the wall is no longer necessary!
- Better optics and better soundproofing through corner pre-wall installation
- Maximum shower enjoyment through "diagonal showering"!



## Corner installation panel made of PUR for shower fittings

### Art.-No. 1833

- suitable for all Grumbach corner shower floor elements
- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated, 100% waterproof
- can be tiled directly
- 2 parts (fitted together to room height). Please mention the room height when ordering (max. height 250 cm).
- with absolutely waterproof sealing foil for reliable wall connection
- with sealant, 300 ml cartridge (Art.-No. 1898)
- with two revision ducts for a simple connection and easy access to water and wastewater installation
- with two wall access points 1/2" for pre-wall fittings or with built-in skeleton
- construction set for concealed fittings is available at extra cost at the customer's request
- with fastening material



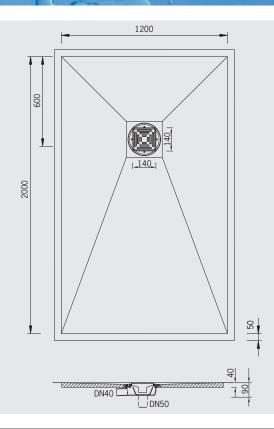
225,-€



# Shower floor elements made of PUR

with eccentic punctual drainage





## Shower floor element made of PUR 120x 200 cm with eccentric drainage, without drain

Art -	No	1845	
ALC-	10.	1042	

570,-€

- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated
- can be tiled directly

Shower floor systems

- with high point load capacity, therefore also suitable for wheelchairs
- with built in 4-sided slope
- with extra low installation height!
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)
- A connecting-sealing strip for the internal corners is included in the scope of delivery (Art-No. 1894).
- horizontal or vertical drain, can be ordered separately, see page 46
- Design grates made of stainless steel are available at extra charge, see page 46.
- Special shapes can be supplied on request at extra cost (80,- €, Art.-No. 1899.0)! See order form on page 58.

## Technical data

Technical data	
Dimensions	1200x2000x40 mm
Height with drain siphon (horizontal)	90 mm without use of adjustable feet 115 mm with adjustable feet (min.) 135 mm with adjustable feet (max.) Hight of the adjustable feet: 55 mm
Drain connection	DN 40 horizontal DN 50 vertical
Drain capacity	0,7 l/s (DN 50) / 0,7 l/s (DN 40)
Slope	ca. 2 %
Strength	ca. 350 kg/m <sup>2</sup>
Density	ca. 400 kg/m <sup>3</sup>
Tile height	8–45 mm
Inlet grate made of stainless steel	140x140 mm
Water sealing height	40 mm
Sealing strip overlap	50 mm

#### Please order separately:



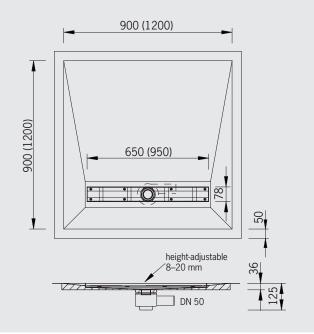


The bathroom drain made of PUR, vertical or horizontal, suitable for
the respective shower floor element (see page 46).

## Shower floor elements made of PUR

with channel drainage





## Shower floor element made of PUR 90x90 cm with drainage channel 650 mm long



## Shower floor element made of PUR 120x120 cm with drainage channel 950 mm long

## Art.-No. 1825

- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated, 100% waterproof
- can be tiled directly
- with high point load capacity, therefore also suitable for wheelchairs
- with horizontal drain DN 50, manufacturer SANIT, and drainage channel 650 bzw. 950x 78 mm, made of stainless steel
- with stainless steel drain cover with drain groove (closed from above or can be tiled when turned)
- with drain siphon, lock screw and siphon seal
- with built-in slope
- with low installation height
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)
- A connecting-sealing strip for the internal corners is included in the scope of delivery (Art-No. 1894).
- square-shaped 90 x 90 cm or 120 x 120 cm (can be shortened in the factory by request)
- Special shapes can be supplied on request at extra cost (75,- €, Art.-No. 1899.0)! See page 58.

r		
Technical data		
Dimensions	900 x 900 x 36 mm	1200 x 1200 x 36 mm
Sealing strip overlap	50 mm	50 mm
Height with drain siphon	125 mm	125 mm
Drain connection	DN 50 waagerecht	DN 50 waagerecht
Drain capacity	0,7 l/s	0,7 l/s
Slope	ca. 2 %	ca. 2 %
Strength	ca. 350 kg/m <sup>2</sup>	ca. 350 kg/m <sup>2</sup>
Density	ca. 400 kg/m <sup>3</sup>	ca. 400 kg/m <sup>3</sup>
Tile height	8–20 mm	8–20 mm
Inlet grate made of stainless steel	650 x 78 mm	950x78 mm
Water sealing height	50 mm	50 mm

## Extra cost for design channel

Art.-No. 1829.1

300,– €



595.-€



## Shower floor element made of PUR

with channel drainage and hight-adjustable side panel



Shower floor element made of PUR 120x120 cm complete with channel drainage and heightadjustable side panel, without drain

#### Art.-No. 1821

725.-€

- Absolutely waterproof and protection against flooding based on the tub-like construction!
- made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR)
- heat and condensation insulated, 100% waterproof
- can be tiled directly

Shower floor systems

- drain channel with complete surrounding, height-adjustable side panel made of stainless steel. For covering height from approx.
   6–18 mm.
- with stainless steel drain cover with drain groove (closed from above or can be tiled when turned)
- horizontal or vertical drain, can be ordered separately, see page 46
- with expanded, absolutely waterproof sealing foil with overlap, therefore reliable sealing of all of the connections (Floor/Floor, Floor/Wall)

#### Extra cost for stainless steel cover grate "Design"

Art.-No. 1821.DD

330,– €

230,–€

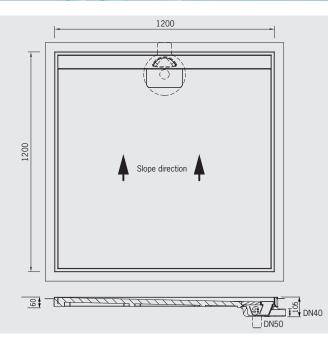
000000000000

#### Extra cost for cutting of the shower floor element

Art.-No. 1821.Zu

suitable for Art.-No. 1821

See order form regarding special configurations, page 58.



Technical data	
Dimensions	1200x1200x60 mm
Sealing strap overlap	50 mm
Installation height vertical drain Installation height horizontal drain	60 mm 105 mm
Drain connection	DN 50 vertical/DN 40 horizontal
Drain capacity	0,7 l/s (DN 50) / 0,7 l/s (DN 40)
Slope	ca. 1,3° / ≈2%
Tile height	6–18 mm
Water sealing height	40 mm



#### The Innovation!

By using flexible EPDM, it is possible to remove and clean parts such as the water seal container and immersion pipe through the smaller opening in the narrow drain channel!



Installation example: Shower floor element (Art.-No. 1821) with cover grate »Design« (Art.-No. 1821.DD) Pre-fabricated elements for floor-level showers made of high grade, CFC-free and extra stable Polyurethane integral rigid foam (PUR) can be tiled directly

## Support frame for shower floor elements

made of lacquered or galvanized tubular steel



Yellow lacquered or galvanized tubular steel frame with adjustable feet and bracket for a Grumbach shower floor drain

■ Support frame 90 x 90 cm (10 adjustable feet) Art.-No. 1814.90 405,- €

■ Support frame 120x120 cm (18 adjustable feet) Art.-No. 1814.120 545,- €

Support frame special size up to 90x90 cm (max. 10 adjustable feet)

Art.-No. 1814.90.SON

Support frame special size up to 120x120 cm (max. 18 adjustable feet)

Art.-No. 1814.120.SON

Support frame special size up to 120x200 cm (max. 24 adjustable feet)

Art.-No. 1814.200.SON

# When ordering, please mention the article number of the shower floor element used.

- suitable for all Grumbach shower floor elements
- **very flat construction** for the optimal and simple mounting of shower floor elements
- simple mounting and plumbing of the Grumbach shower floor drain under the shower floor element
- suitable for vertical and horizontal drains
- a lot of room for the plumbing of the drainpipes
- with stable height-adjustable feet M12 for simple positioning and for fastening to the floor
- de-coupled from structure-borne sound due to rubber on the adjustable feet
- including mounting adhesive for sticking to the corresponding shower floor element



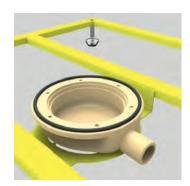
Scan the code and watch the **assembly** video for Grumbach shower floor elements!



Support frame for shower floor elements  $90 \times 90$  cm, yellow lacquered, with 10 adjustable feet, bottom view



Support frame for shower floor elements  $90 \times 90$  cm, galvanized, with 10 adjustable feet, view from above



Bracket for the shower floor drain



Adjustable feet for simple positioning and fastening: with layer of rubber for the de-coupling of structure-borne noise. The number of adjustable feet depends on the frame size.

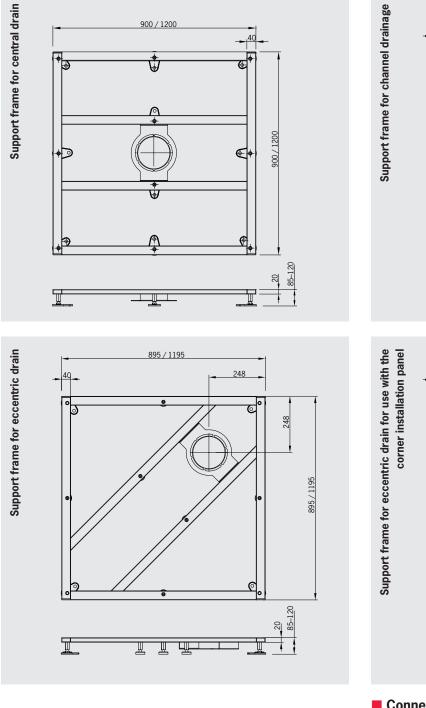
425.-€

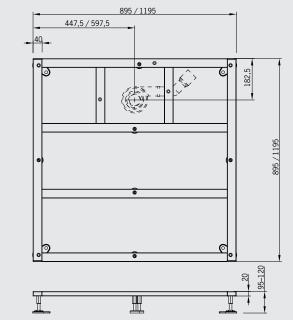
565,-€

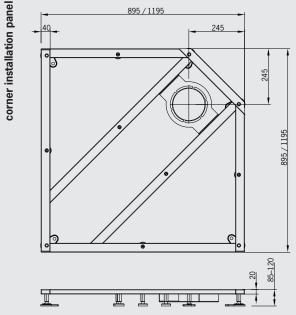
695.– €



# Support frame and accessories for shower floor elements







## Connecting sealing strip 12 cm width

ArtNo. 1890	net price 12,– €/m
Connecting sealing stri	n angled 6x6 cm
ArtNo. 1891	net price 12,– €/m
	-
Connecting sealing stri ArtNo. 1894	p inside corner net price 12,– €
	net price 12,– €

## Extra cost for special

for shower floor elements made of PUR Art.-No. 1899.0 80,-



Connecting sealing strips and adhesive cartridge

€

Adhesive for sealing strips,	300 ml cartridge
ArtNo. 1898	net price 25

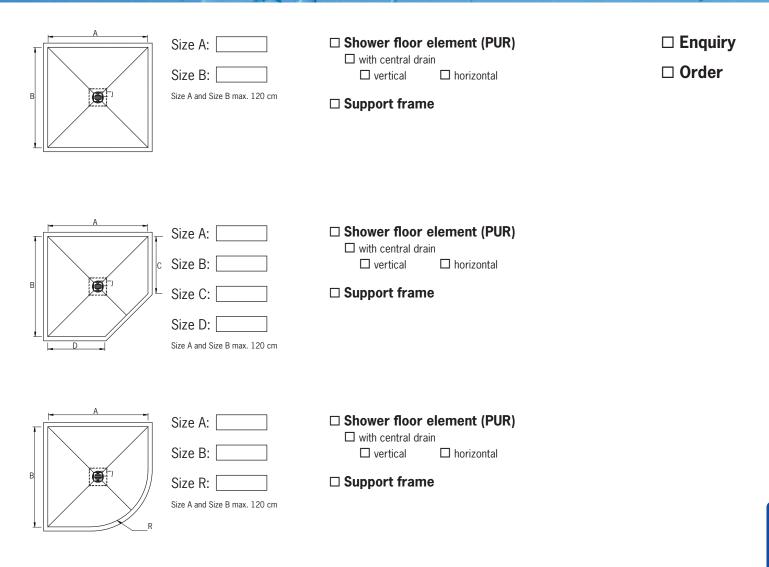
54

Shower floor systems



## Order form special models/shapes

Please fill in all relevant dimensions and check the corresponding boxes



#### Please note:

All Grumbach shower floor elements have a 5 cm wide **sealing foil cover**. Through the cutting of the Grumbach shower floor element, the ends of the sloping lines no longer end in the corners of the elements. After cutting, the surrounding edge of the shower element is no longer of uniform height. This can be remedied on site with the corresponding tile adhesive.

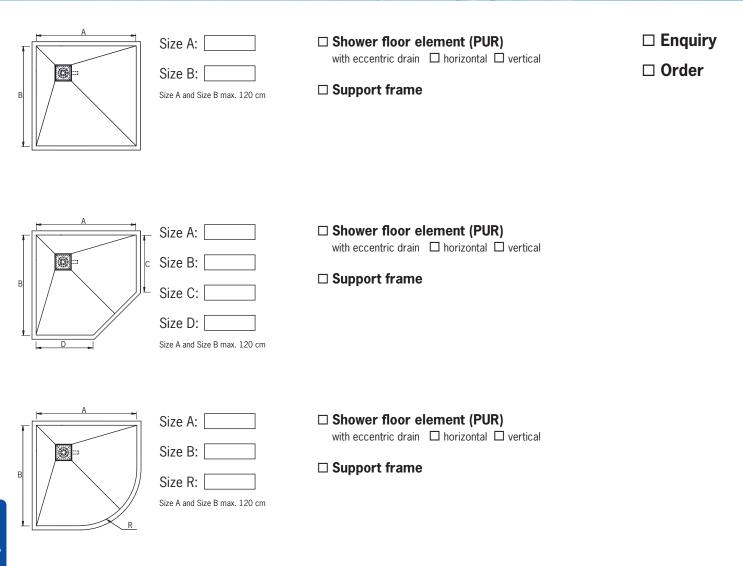
#### The support frames only fit onto the Grumbach shower floor elements.

Please fill in the fields:			
Sender/Stamp	Contact person		
	Telephone		
	Telefax		
	Date/Signature		



## Order form special models/shapes

Please fill in all relevant dimensions and check the corresponding boxes



### Please note:

All Grumbach shower floor elements have a 5 cm wide **sealing foil cover**. Through the cutting of the Grumbach shower floor element, the ends of the sloping lines no longer end in the corners of the elements. After cutting, the surrounding edge of the shower element is no longer of uniform height. This can be remedied on site with the corresponding tile adhesive.

The support frames only fit onto the Grumbach shower floor elements.

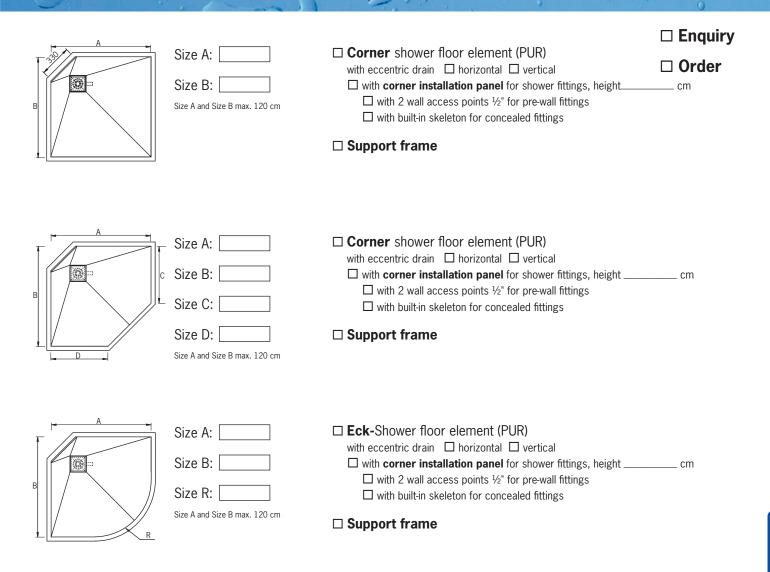
## Please fill in the fields:

Sender/Stamp	Contact person
	Telephone
	Telefax
	Date/Signature



## Order form special models/shapes

Please fill in all relevant dimensions and check the corresponding boxes



#### Please note:

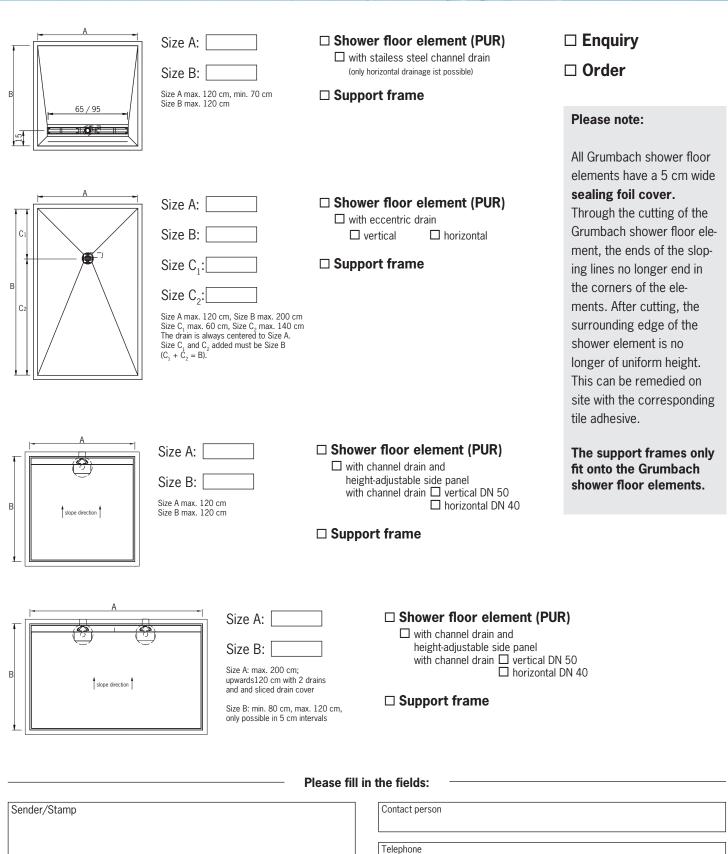
All Grumbach shower floor elements have a 5 cm wide **sealing foil cover**. Through the cutting of the Grumbach shower floor element, the ends of the sloping lines no longer end in the corners of the elements. After cutting, the surrounding edge of the shower element is no longer of uniform height. This can be remedied on site with the corresponding tile adhesive.

#### The support frames only fit onto the Grumbach shower floor elements.

Please fill in the fields:			
Sender/Stamp	Contact person		
	Telephone		
	Telefax		
	Date/Signature		



Please fill in all relevant dimensions and check the corresponding boxes



Shower floor systems

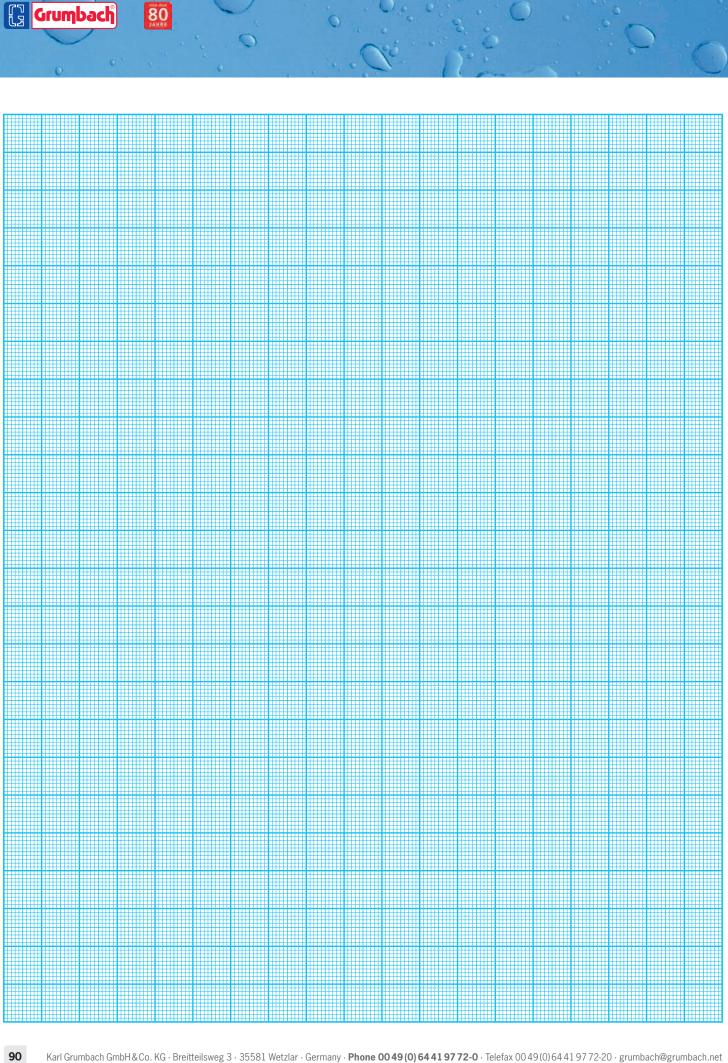
Grumbach

80

Telefax

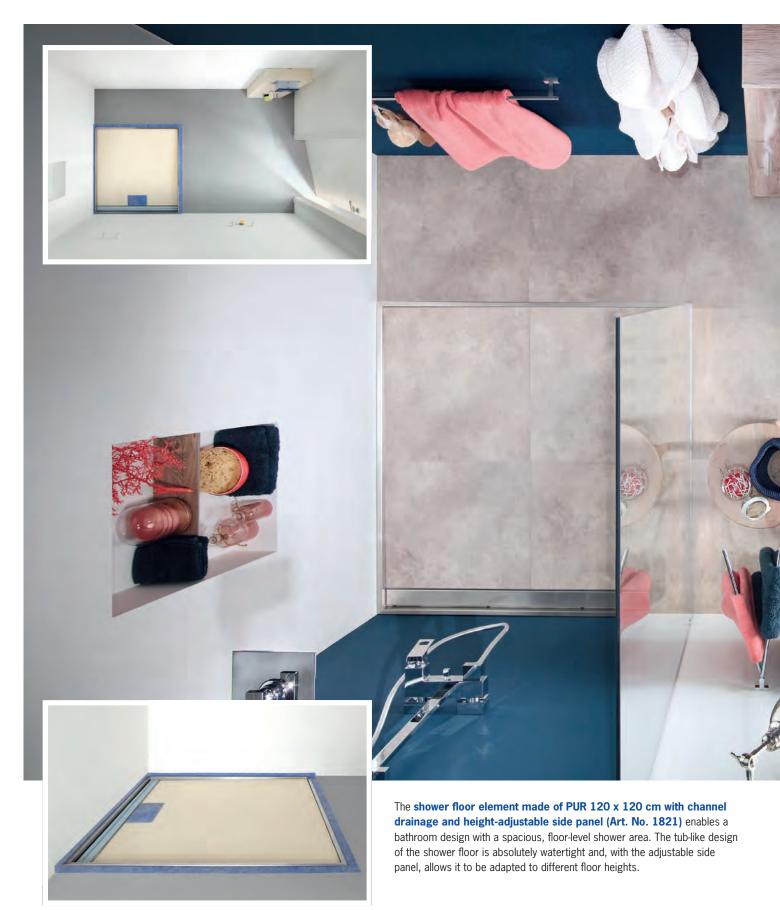
Date/Signature







## Standard bathroom





When it looks good in the bathroom, there often is a Grumbach sanitary product behind it.



Gallery



## Narrow bathroom, width 90 cm

80





Even a "tubular bath" that is only 90 cm wide can be sensibly designed with the innovative Grumbach sanitary products. With the **shower floor element made of PUR with channel drainage and height-adjustable side panel**, the width of the room is used for a floor-level shower.

The Grumbach **SLIM block in the 15° complete set** ensures an unprecedented, stable and space-saving toilet installation. The **Grumbach washbasin block** can be reduced to a depth of just 12.5 cm, as shown here, and nestles closely against the wall. A fully-fledged bathroom with a width of only 90 cm!



When it looks good in the bathroom, there often is a Grumbach sanitary product behind it.

## Narrow bathroom, width 120 cm







■ For all Grumbach sanitary blocks, see pages 3–37, find the shower floor elements from page 43.



With Grumbach sanitary products, an attractive bathroom design is possible even in tight spaces. In this example of a bathroom that is only about 120 cm wide, a **shower floor element made of PUR 120 x 120 cm with channel drainage and height-adjustable side panel (Art. No. 1821)** is used in conjunction with a **corner WC-block 108 cm high (Art. No. 1301.III)**. Thanks to the space-saving WC installation, there is still enough freedom of movement despite the spacious shower, even in this "tubular bath".

Gallery



When it looks good in the bathroom, there often is a Grumbach sanitary product behind it.

## Main bathroom an "attic bathroom"

80

Grumbach



Grumbach sanitary blocks also cut a fine figure in spacious bathrooms. The corner WC-block fits perfectly into the airy appearance. The space-saving toilet installation creates space for bathroom designs as desired.



An unused attic becomes an "oasis". The available low heights of the **Grumbach corner WC-block** allow installation on the jamb. The spacious, floor-level shower area is realized with the help of the **120 x 120 cm shower floor element made of PUR with channel drainage and height-adjustable side panels.** 

#### Grumbach 80

O Essen

Düsseldorf

Koblenz 🔘

00

o Köln

**Grumbach sales representatives** for sanitary wholesalers and plumbers

updated 2022



# Grumbach - is near you

## 1 Team North Sales representative:

**Siegfried Lang** Phone: +496441 9772-29 Mobile: +49163) 4977200 E-Mail: ad3@grumbach.net Zip code area: 0 complete, 1 complete, 2 complete, 30-34, 37-39, 4 complete, 50-52, 57-59

## 

**Technical advice: Christopher Jung** Bachelor of Engineering Phone: +496441 9772-52 E-Mail: ch.jung@grumbach.net

Karl Grumbach GmbH & Co. KG Breitteilsweg 3 · 35581 Wetzlar GERMANY Phone +49 64 41 97 72 0 Telefax +49 64 41 97 72 20 www.grumbach.net grumbach@grumbach.net

## Team South Sales representative: Jörg Grumbach

Phone: +49 64 41 97 72-19 Mobile: +49 1 63 4 97 72 01 E-Mail: ad1@grumbach.net Zip code area: 53–56, 6 complete, 7 complete, 8 complete, 9 complete

## 

Technical advice: **Jan-Niclas Münch** Bachelor of Engineering Phone: +49 64 41 97 72-53 Mail: j.muench@grumbach.net

Karl Grumbach GmbH & Co. KG · Breitteilsweg 3 · 35581 Wetzlar · Germany · Phone 0049 (0) 6441 9772-0 · Telefax 0049 (0) 6441 9772-20 · grumbach@grumbach.net



0

0

0

0

Ø

0

00

00

O

0

0

ő

0

0

0

O

()

6

0

0

## Karl Grumbach GmbH & Co. KG Breitteilsweg 3 · 35581 Wetzlar GERMANY Phone +49 64 41 97 72 0 Telefax +49 64 41 97 72 20 www.grumbach.net grumbach@grumbach.net

l

Distributed by:

60